



Tree Inventory Summary Report

Village of Milford, Michigan

March 2016

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Acknowledgments

The Village of Milford's vision to promote and preserve the urban forest and improve the management of public trees was a fundamental inspiration for this project. This vision will ensure canopy continuity, which will reduce stormwater runoff and improve air quality, public health, and aesthetic values.

The Village of Milford is thankful for the grant funding it received from the Urban and Community Forestry program of the Michigan Department of Natural Resources. The grant program is designed to encourage communities to create and support long-term and sustained urban and community forestry programs throughout Michigan.

Notice of Disclaimer: Inventory data provided by Davey Resource Group, a division of The Davey Tree Expert Company, are based on visual recording at the time of inspection. Visual records do not include individual testing or analysis, nor do they include aerial or subterranean inspection. Davey Resource Group is not responsible for the discovery or identification of hidden or otherwise non-observable hazards. Records may not remain accurate after inspection due to the variable deterioration of inventoried material. Davey Resource Group provides no warranty with respect to the fitness of the urban forest for any use or purpose whatsoever. Clients may choose to accept or disregard Davey Resource Group's recommendations, or to seek additional advice. Important: know and understand that visual inspection is confined to the designated subject tree(s) and that the inspections for this project are performed in the interest of facts of the tree(s) without prejudice to or for any other service or any interested party.

Executive Summary

The Village of Milford commissioned an inventory and assessment of trees located within public street rights-of-way (ROW) and Central Park. Understanding an urban forest's structure, function, and value can promote management decisions that will improve public health and environmental quality. Davey Resource Group collected and analyzed the inventory data to understand species composition and tree condition and to generate maintenance recommendations. This report will discuss the health and benefits of the inventoried street and park tree populations throughout the Village of Milford.

Key Findings

- The appraised value of the inventoried tree population is approximately \$6 million.
- A total of 3,066 trees were inventoried.
- The most common species are: *Acer saccharum* (sugar maple), 17%; *Pyrus calleryana* (Callery pear), 13%; *A. platanoides* (Norway maple), 11%; *A. rubrum* (red maple), 11%; and *Gleditsia triacanthos inermis* (thornless honeylocust), 9%.
- The plurality (45%) of the urban forest is in the young, 0–8 inches diameter at breast height (DBH) class.
- The overall condition of the tree population is Fair or Good.
- Risk Ratings include: 2,975 Low Risk trees; 84 Moderate Risk trees; 7 High Risk trees; and 0 Extreme Risk trees.
- Primary Maintenance recommendations include: 1,373 Routine Prunes; 928 Young Tree Trains; 639 Tree Cleans; and 126 Removals.

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Section 1: Tree Inventory Assessment

Project Area

In March 2016, Davey Resource Group arborists assessed and inventoried trees sites along the public street rights-of-way (ROW) and Central Park in the Village of Milford. See Appendix A for an overview of the site location methodology used in the inventory and assessment.

Species Diversity

Throughout Milford's ROW and Central Park, 3,066 trees were inventoried. Figure 1 shows the composition of the most populous species compared to all inventoried species. The composition of a tree population should follow the 10-20-30 Rule for species diversity: a single species should represent no more than 10% of the urban forest, a single genus no more than 20%, and a single family no more than 30%.

Of the inventoried species within the ROW and Central Park, sugar maple (17%), Callery pear (13%), Norway maple (11%), and red maple (11%) all exceed the 10% threshold. Thornless honeylocust falls just below the threshold, comprising 9% of the total inventoried population. The village should limit future plantings of maple and pear until a higher level of tree diversity is achieved.

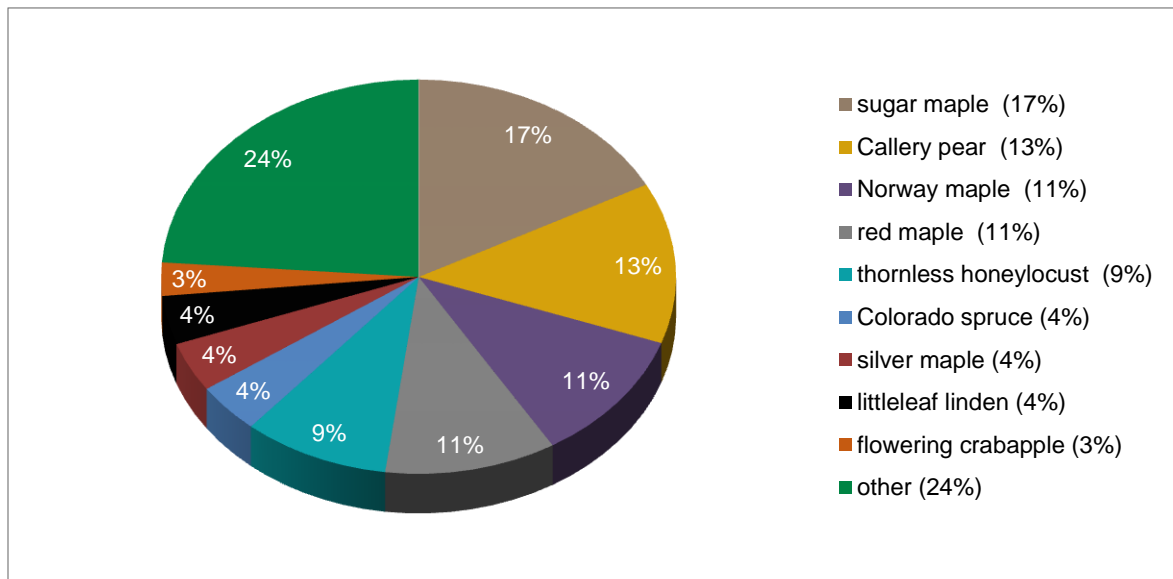


Figure 1. Tree species composition in Milford, Michigan.

Figure 2 compares the percentages of the most common genera identified during the inventory to the 20% Rule. *Acer* (maple) significantly exceeds the recommended 20% threshold for a single genus in a population. Maple comprises 46% of the street and park tree populations.

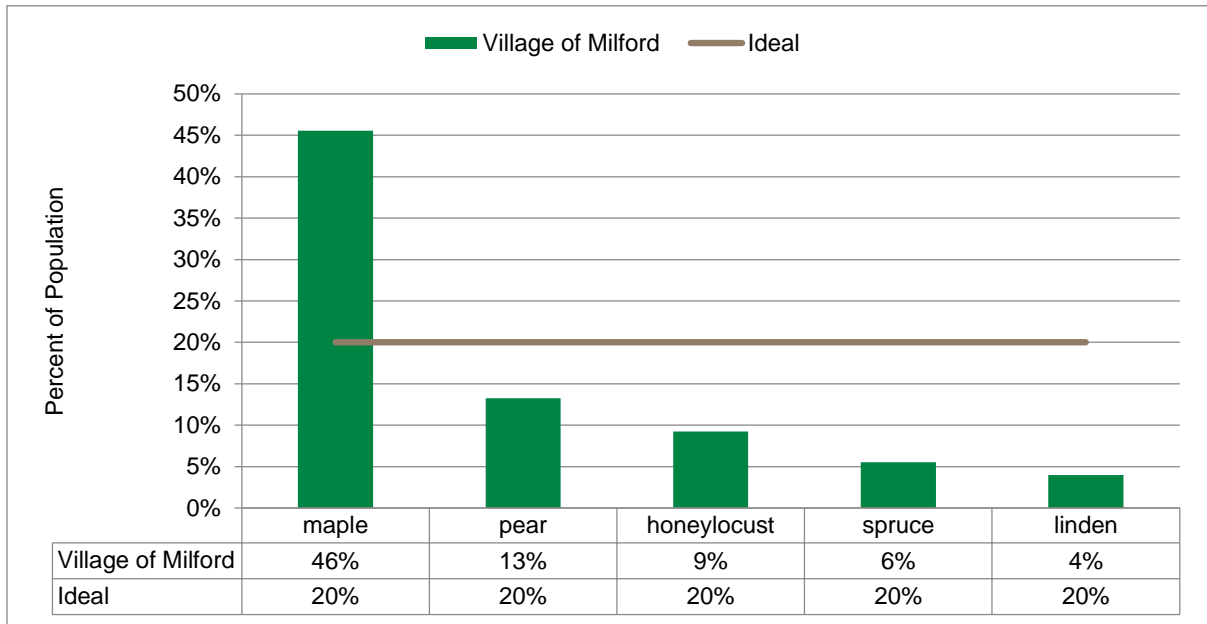


Figure 2. Top five genera in Milford, Michigan in relation to the 20% Rule.

Diameter Size Class Distribution

Analyzing the diameter size class distribution (measured as diameter at breast height [DBH]) provides an estimate of the relative age of a tree population and lends insight into maintenance practices and needs.

The inventoried trees were categorized into the following diameter size classes: young trees (0–8 inches DBH); established trees (9–17 inches DBH); maturing trees (18–24 inches DBH); and mature trees (greater than 24 inches DBH). These categories were chosen so that the population could be analyzed following Richards’ ideal distribution (1983). Richards proposed an ideal diameter size class distribution for street trees based on observations of well-adapted trees in Syracuse, New York. Richards’ ideal distribution suggests that the largest fraction of trees (approximately 40% of the population) should be young (less than 8 inches DBH), while a smaller fraction (approximately 10%) should fall in the large-diameter size class (greater than 24 inches DBH). A tree population with an ideal distribution would have an abundance of newly planted and young trees, and lower numbers of established, maturing, and mature trees.

Figure 3 compares Milford’s inventoried street and park tree diameter size class distribution to the ideal proposed by Richards (1983). Milford’s distribution trends toward the ideal; however, established trees fall short of the ideal by roughly 15%. As the urban forest in Milford ages, this ideal will begin to balance out. Continued tree planting, care, and maintenance of the young and established tree population will help achieve a more sustainable size distribution of street trees and park trees in Milford.

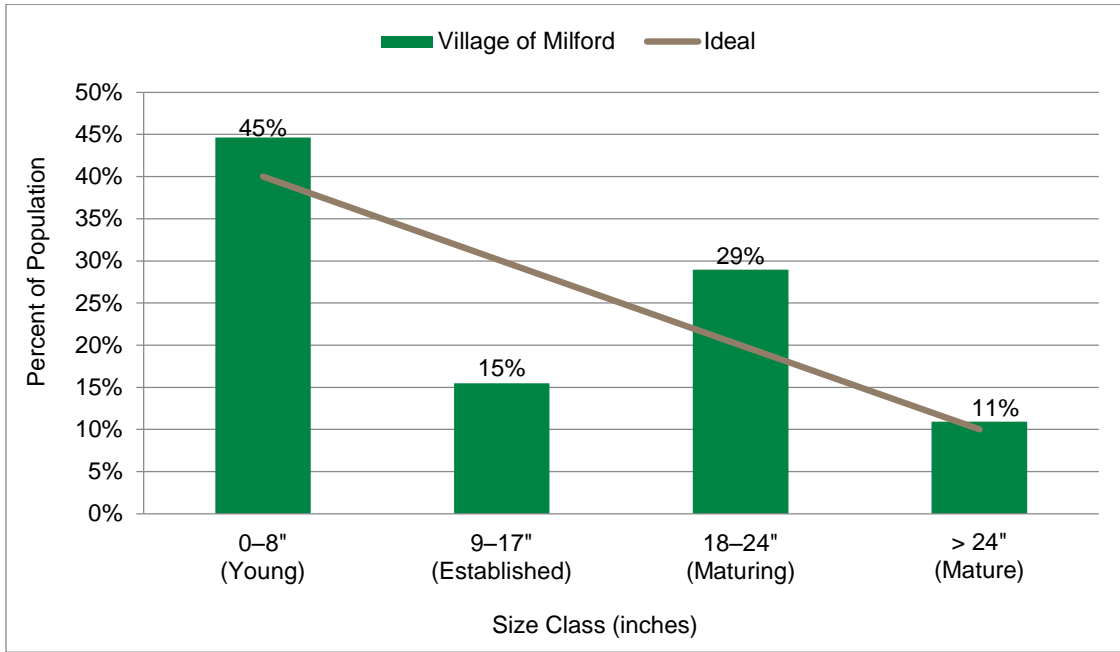


Figure 3. Age class distribution compared to Richards' (1983) ideal.

Condition

Several factors were considered for the condition of each tree, including: root characteristics; branch structure; trunk; canopy; foliage condition; and the presence of pests. The condition of each inventoried tree was rated Excellent, Very Good, Good, Fair, Poor, Critical, or Dead.

Most of the inventoried ROW trees were recorded to be in Fair or Good condition, 45% and 47%, respectively (Figure 4). Based on these data, the general health of the inventoried tree population is rated Fair or better.

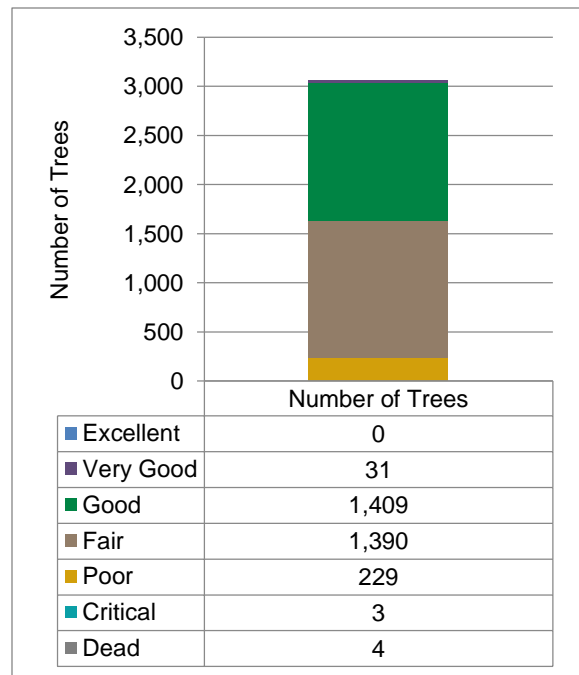


Figure 4. Overall condition of the population.

Figure 5 illustrates the general condition of the urban forest in relation to the relative age classes. The majority of young trees were rated to be in Good to Excellent condition. The majority of established, maturing, and mature trees were rated to be in Fair condition. With proactive care and an established maintenance schedule, the village can improve the long-term health of its urban forest.

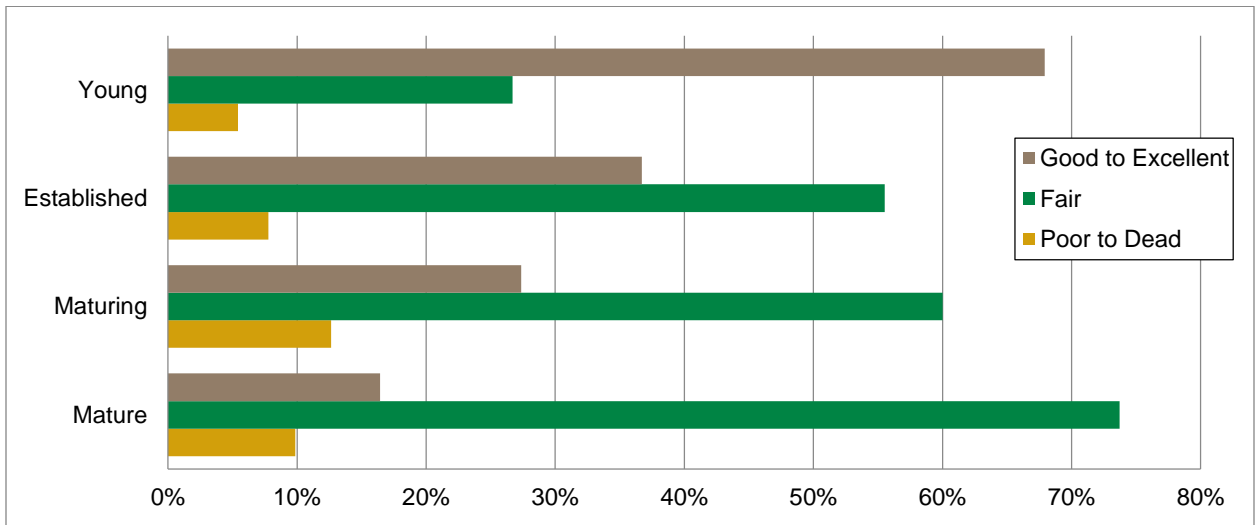


Figure 5. Tree condition by age class.

Primary Maintenance and Risk

Primary maintenance refers to the task identified for a tree or site: Removal, Tree Clean, Routine Prune, or Young Tree Train. Risk is a graduated scale that measures potential tree-related hazardous conditions. A tree is considered hazardous when its potential risks exceed an acceptable level.

Davey Resource Group based the maintenance recommendations and risk values (Figure 6) on the evaluation of species, diameter class, condition, impact of hazard, and defects found in each individual tree. Identifying and ranking the maintenance needs of a tree population enable tree work to be assigned priority based on observed defects. Once prioritized, tree work can be systematically addressed to eliminate the greatest risk and liability first (Stamen 2011).

Based on the inventoried population in Milford, the following maintenance recommendations should be implemented: 126 Removals, 639 Tree Cleans, 1,373 Routine Prunes, and 928 Young Tree Trains. Figure 6 illustrates the risk values associated with each maintenance need.

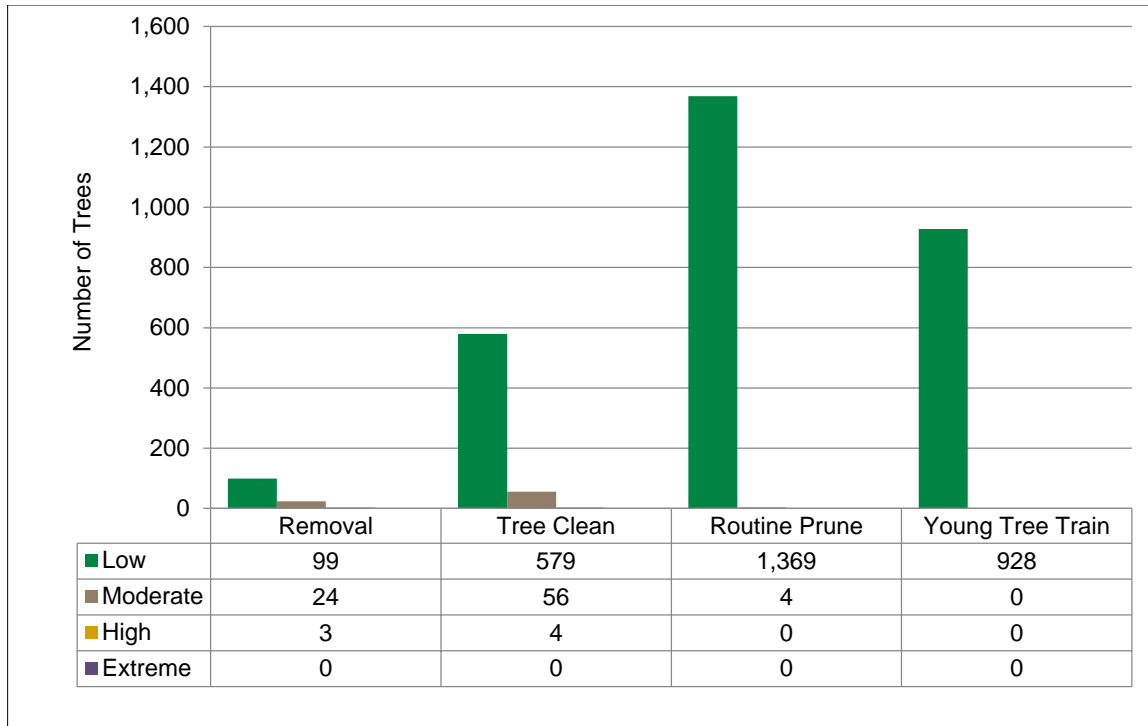


Figure 6. Maintenance needs by risk rating.

Conclusion and Recommendations

Managing trees in urban areas can be complicated. Navigating the recommendations of experts, the needs of residents, the pressures of local economics and politics, concerns for public safety and liability, physical components of trees, forces of nature and severe weather events, and the expectation that these issues are resolved all at once is a considerable challenge.

The Village of Milford must carefully consider these challenges to fully understand the needs of maintaining an urban forest. By completing a tree inventory, the village has shown interest in preserving the urban forest, but also maintaining it for future generations. If the village successfully implements established planting and maintenance programs that include Young Tree Training, Tree Cleaning and Routine Pruning, Tree Removal, and public outreach, the health and safety of Milford’s trees and residents will be maintained for years to come.

Milford’s urban forest is in Fair or better condition. With continued dedication to its street and park tree resources, the village can improve the condition and diversity of its trees and increase the annual benefits they provide.

Glossary

arboriculture: The art, science, technology, and business of commercial, public, and utility tree care.

canopy: Branches and foliage that make up a tree's crown.

community forest: see **urban forest**.

condition (data field): The general health assigned to each inventoried tree according to the following categories adapted from the International Society of Arboriculture's rating system: Excellent (100%), Very Good (90%), Good (80%), Fair (60%), Poor, (40%), Critical (20%), Dead (0%).

diameter at breast height (DBH): See **tree size**.

diameter: See **tree size**.

Extreme Risk tree: Applies in situations where tree failure is imminent, there is a high likelihood of impacting the target, and the consequences of the failure are "severe." In some cases, this may mean immediate restriction of access to the target zone area in order to prevent injury.

genus: A taxonomic category ranking below a family and above a species and generally consisting of a group of species exhibiting similar characteristics. In taxonomic nomenclature, the genus name is either used as a standalone term or is followed by a Latin adjective or epithet to form the name of a species.

High Risk Tree: The High Risk category applies when consequences are "significant" and likelihood is "very likely" or "likely," or consequences are "severe" and likelihood is "likely." In population of trees, the priority of High Risk trees is second only to Extreme Risk trees.

inventory: See **tree inventory**.

Low Risk tree: The Low Risk category applies when consequences are "negligible" and likelihood is "unlikely"; or consequences are "minor" and likelihood is "somewhat likely." Some trees with this level of risk may benefit from mitigation or maintenance measures, but immediate action is not usually required.

Moderate Risk tree: The Moderate Risk category applies when consequences are "minor" and likelihood is "very likely" or "likely"; or likelihood is "somewhat likely" and consequences are "significant" or "severe." In populations of trees, Moderate Risk trees represent a lower priority than High or Extreme Risk trees.

monoculture: A population dominated by one single species or very few species.

Primary Maintenance Need (data field): The type of tree work needed to reduce immediate risk.

pruning: The selective removal of plant parts to meet specific goals and objectives.

Removal (Primary Maintenance Need): Data field collected during the inventory to identify the need to remove a tree. Trees designated for removal have defects that cannot be cost-effectively or practically treated. Most of the trees in this category have a large percentage of dead crown.

right-of-way (ROW): See **street right-of-way**.

risk: Combination of the probability of an event occurring, along with its consequence.

risk assessment (data fields): A point-based assessment of each tree as determined by an arborist using a protocol based on the U.S. Forest Service Community Tree Risk Rating System. In the field, the probability of tree or tree part failure is assigned 1–4 points (identifies the most likely failure and rates the likelihood that the structural defect(s) will result in failure based on observed, current conditions); the size of a defective tree part is assigned 1–3 points (rates the size of the part most likely to fail); the probability of target impact by the tree or tree part is assigned 1–3 points (rates the use and occupancy of the area that would be struck by the defective part); and other risk factors are assigned 0–2 points (used if professional judgment suggests the need to increase the risk rating). Data from the risk assessment is used to calculate the risk rating that is ultimately assigned to each tree.

risk rating: Level 2 qualitative risk assessment will be performed on the ANSI A300 (Part 9) and the companion publication *Best Management Practices: Tree Risk Assessment*, published by International Society of Arboriculture (2011). Trees can have multiple failure modes with various risk ratings. One risk rating per tree will be assigned during the inventory. The failure mode having the greatest risk will serve as the overall tree risk rating. The specified time period for the risk assessment is one year.

Routine Prune (Primary Maintenance Need): Trees in this category have characteristics that could become risks if not corrected. Dead, diseased, dying, or otherwise poorly structured limbs are generally less than 2 inches in diameter. These trees should be pruned within the community’s regular pruning cycle.

species: Fundamental category of taxonomic classification, ranking below a genus or subgenus, and consisting of related organisms capable of interbreeding.

stem: A woody structure bearing buds and foliage, and giving rise to other stems.

stems (data field): Identifies the number of stems or trunks splitting less than 1 foot above ground level.

street name (data field): The name of a street right-of-way or road identified using posted signage or parcel information.

street right-of-way (ROW): A strip of land generally owned by a public entity over which facilities, such as highways, railroads, or power lines, are built.

street tree: A street tree is defined as a tree within the right-of-way.

structural defect: A feature, condition, or deformity of a tree or tree part that indicates weak structure and contributes to the likelihood of failure.

tree: A tree is defined as a perennial woody plant that may grow more than 20 feet tall. A tree generally has one main stem, although many species may grow as multi-stemmed forms.

Tree Clean (Primary Maintenance Need): These trees require selective removal of dead, dying, broken, and/or diseased wood to minimize potential risk. Priority of work should be dependent upon the *Risk* associated with the individual trees. Trees in this category may be large enough to require bucket truck access or manual climbing.

tree inventory: Comprehensive database containing information or records about individual trees typically collected by an arborist.

tree size (data field): A tree’s diameter measured to the nearest inch in 1-inch size classes at 4.5 feet above ground, also known as diameter at breast height (DBH) or diameter.

urban forest: All of the trees within a municipality or a community. This can include the trees along streets or rights-of-way, in parks and greenspaces, in forests, and on private property.

Young Tree Train (Primary Maintenance Need): Data field based on *ANSI A300 (Part 1)* standards, pruning of young trees to correct or eliminate weak, interfering, or objectionable branches to improve structure. These trees grow up to 20 feet in height and can be worked with a pole pruner by a person standing on the ground.

References

- Council of Tree & Landscape Appraisers. 2000. *Guide for Plant Appraisal*, 9th ed. Champaign, IL: International Society of Arboriculture.
- Richards, N.A. 1983. "Diversity and Stability in a Street Tree Population." *Urban Ecology* 7(2):159–171.
- Stamen, R.S. "Understanding and Preventing Arboriculture Lawsuits." Presented at the Georgia Urban Forest Council Annual Meeting, Madison, Georgia, November 2–3, 2011.

Appendix A Site Location Methods

Equipment and Base Maps

Inventory arborists use CF-19 Panasonic Toughbook® unit(s) and Trimble® GPS Pathfinder® ProXH™ receiver(s).

Base map layers were loaded onto these unit(s) to help locate sites during the inventory. Table 1 lists the base map layers utilized along with source and format information for each layer.

Table 1. Base Map Layers Utilized for Inventory

Imagery/Data Source	Date	Projection
City of Milford Oakland County, MI; GIS	2014	NAD 1983 HARN State Plane Michigan South Feet_Int

Street AND Park ROW Site Locations

Individual street ROW and park trees were located using a methodology developed by Davey Resource Group that identifies sites by *address number*, *street name*, *side*, and *On Street*. This methodology allows for consistent assignment of location.

Address Number and Street Name

The *address number* was recorded based on visual observation by the arborist at the time of the inventory (the address number posted on a building at the inventoried site). Where there was no posted address number on a building or where the site was located by a vacant lot with no GIS parcel addressing data available, the address number assigned was matched as closely as possible to opposite or adjacent addresses by the arborist and an “X” was added to the number in the database to indicate that it was assigned (for example, “37X Choice Avenue”).

Sites in medians or islands were assigned an address number using the address on the right side of the street in the direction of collection closest to the site. Each segment was numbered with an assigned address that was interpolated from addresses facing that median/island. If there were multiple median/islands between cross streets, each segment was given its own assigned address.

The *street name* assigned to a site was determined by street ROW parcel information and posted street name signage.

Side Value

Each site was assigned a *side value*. Side values include: *front*, *side*, *median* (includes islands), or *rear* based on the site’s location in relation to the lot’s street frontage (Figure 1). The *front side* is the side that faces the address street. *Side* is the name of the street adjacent to the front of the house on either side. *Median* indicates a median or island. The *rear* is the side of the lot opposite of the front.

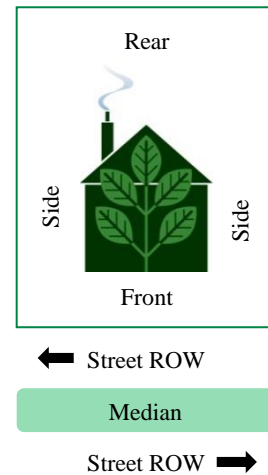


Figure 1. Side values for street ROW sites.

Block Side

Block side information for a site includes the *on street* and *street*.

- The *on street* is the street that the site is physically located on. (The *on street* may not match the address street. A site may be physically located on a street that is different from its street address, for example, a site located on a side street.)
- The *street* is the street that the property is actually addressed to. Regardless of the *on street*, the property will always have a *street* that matches its address.

Park and/or Public Space Site Location

Park and/or public space site locations were collected using the same methodology as street ROW sites; however, the *on street* and *street* would be the park and/or public space's name (not street names).

Appraised Value

The methodology used to appraise the landscape value derives from the *Guide for Plant Appraisal* (9th edition), published by the International Society of Arboriculture.

Appendix B
Tree Inventory Analysis Reports



Condition/Age Class Frequency Matrix

<i>Condition</i>	<i>0 - 8</i>	<i>18 - 24</i>	<i>9 - 17</i>	<i>25+</i>	<i>TOTAL</i>
Critical		1	2		3
Dead	3		1		4
Fair	365	285	493	247	1390
Good	900	129	325	55	1409
Poor	71	59	66	33	229
Very Good	29	1	1		31
Grand Total	1368	475	888	335	3066



Maintenance Need/DBH Class Matrix Report

Maintenance Need	N/A	1 - 3	4 - 6	7 - 12	13 - 18	19 - 24	25 - 30	31 - 36	37 - 42	43 +	TOTAL
Removal		32	19	23	26	13	8	1	3	1	126
Routine Prune		24	50	624	372	199	67	31	6		1373
Tree Clean				125	131	165	114	66	23	15	639
Young Tree Train		502	424	2							928
Grand Total		558	493	774	529	377	189	98	32	16	3066



Risk Rating / DBH Class Matrix Report

<i>Risk Rating</i>	<i>N/A</i>	<i>1 - 3</i>	<i>4 - 6</i>	<i>7 - 12</i>	<i>13 - 18</i>	<i>19 - 24</i>	<i>25 - 30</i>	<i>31 - 36</i>	<i>37 - 42</i>	<i>43 +</i>	<i>TOTAL</i>
High				5	5		15	5	5		35
Low	#####	24157	37632	24892	17542	8281	4263	1274	392		145775
Moderate				45	180	171	153	90	45	72	756
Grand Total		#####	#####	37682	25077	17713	8449	4358	1324	464	146566



Species/Age Class Frequency Matrix

<i>Age</i>	<i>0 - 8</i>	<i>18 - 24</i>	<i>9 - 17</i>	<i>25+</i>	<i>TOTAL</i>
apple, common			1		1
arborvitae, eastern	23		3		26
ash, green	8				8
ash, white	2		1		3
baldcypress, common	7				7
beech, American	2				2
birch, European white	1	1	1		3
birch, gray	2		1		3
birch, paper			5		5
birch, river	32		2		34
blackgum	1				1
boxelder	13	7	19	4	43
buckeye, Ohio		2			2
catalpa, northern	3	1	1	3	8
cherry, black	3	3	7	3	16
cherry, sweet			1		1
cherry/plum, spp.	15		3	1	19
cottonwood, eastern		7	2	15	24
crabapple, flowering	72		12		84
dogwood, flowering	1				1
dogwood, Kousa	1				1
elm, American	3	3	6	5	17

<i>Age</i>	<i>0 - 8</i>	<i>18 - 24</i>	<i>9 - 17</i>	<i>25+</i>	<i>TOTAL</i>
elm, hybrid	15		1		16
elm, rock	1				1
elm, Siberian	13	10	8	17	48
elm, slippery		1			1
fir, white	5	1	1		7
ginkgo	11				11
hackberry, common	3				3
hawthorn, spp.	2				2
hickory, pignut		1	1		2
hickory, shagbark			3		3
honeylocust, thornless	138	29	114	3	284
horsechestnut	1	4	1	2	8
juniper, spp.	2				2
katsuratree			1		1
lilac, Japanese tree	11				11
linden, littleleaf	88	4	28	3	123
locust, black	1	4	9	2	16
magnolia, saucer	2				2
maple, Amur	3				3
maple, Freeman	4	2	8		14
maple, hedge	2				2
maple, Japanese	3				3
maple, Norway	62	119	134	21	336
maple, paperbark	3				3

<i>Age</i>	<i>0 - 8</i>	<i>18 - 24</i>	<i>9 - 17</i>	<i>25+</i>	<i>TOTAL</i>
maple, red	191	32	73	37	333
maple, silver	2	39	19	66	126
maple, sugar	161	141	144	87	533
mulberry, white	4	7	4		15
oak, black	2	1	2	2	7
oak, bur	1	8		2	11
oak, northern red	26	1	11	1	39
oak, pin	4	4	7	3	18
oak, swamp white				1	1
oak, white		3	1	5	9
pear, Callery	288		119		407
pine, Austrian	6	4	27	2	39
pine, eastern white	8	6	13		27
pine, Scotch		4	7	1	12
poplar, white		1			1
redbud, eastern	5		2		7
redcedar, eastern	4		4		8
serviceberry, spp.	13				13
smoketree, American	2				2
spruce, Colorado	68	7	52		127
spruce, Norway	4	7	12	3	26
spruce, white	10		7		17
sweetgum, American	1		1		2
sycamore, American	1	1	2	31	35

<i>Age</i>	<i>0 - 8</i>	<i>18 - 24</i>	<i>9 - 17</i>	<i>25+</i>	<i>TOTAL</i>
tuliptree	2	1	1		4
walnut, black	4	8	5	14	31
walnut, English		1			1
willow, corkscrew	1				1
willow, weeping			1	1	2
yellowwood	1				1
Grand Total	1368	475	888	335	3066



Milford, MI
Species/Condition Frequency Matrix

<i>Common Name</i>	<i>Excellent</i>	<i>Very Good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Critical</i>	<i>Dead</i>	<i>N/A</i>	<i>TOTAL</i>
apple, common				1					1
arborvitae, eastern		8	12	6					26
ash, green				3	5				8
ash, white					3				3
baldcypress, common			6	1					7
beech, American			2						2
birch, European white				3					3
birch, gray			2	1					3
birch, paper			1	4					5
birch, river			33	1					34
blackgum			1						1
boxelder				26	17				43
buckeye, Ohio				2					2
catalpa, northern			1	5	2				8
cherry, black			3	11	2				16
cherry, sweet				1					1
cherry/plum, spp.			6	9	4				19
cottonwood, eastern			8	16					24
crabapple, flowering			53	28	3				84
dogwood, flowering			1						1
dogwood, Kousa				1					1
elm, American			2	13	1		1		17
elm, hybrid			15	1					16
elm, rock			1						1
elm, Siberian				46	2				48
elm, slippery				1					1

<i>Common Name</i>	<i>Excellent</i>	<i>Very Good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Critical</i>	<i>Dead</i>	<i>N/A</i>	<i>TOTAL</i>
fir, white			6	1					7
ginkgo		1	9	1					11
hackberry, common			3						3
hawthorn, spp.				1	1				2
hickory, pignut			1	1					2
hickory, shagbark			1	2					3
honeylocust, thornless		4	209	66	5				284
horsechestnut				6	2				8
juniper, spp.			2						2
katsuratree				1					1
lilac, Japanese tree			8	1	2				11
linden, littleleaf		1	62	53	7				123
locust, black				15	1				16
magnolia, saucer			2						2
maple, Amur			2	1					3
maple, Freeman			8	5	1				14
maple, hedge				1	1				2
maple, Japanese			2	1					3
maple, Norway		2	105	196	31	1	1		336
maple, paperbark			3						3
maple, red		6	172	135	20				333
maple, silver			15	107	4				126
maple, sugar		4	191	263	74	1			533
mulberry, white				12	3				15
oak, black			1	6					7
oak, bur			6	4	1				11
oak, northern red		1	23	14	1				39
oak, pin			9	8	1				18
oak, swamp white				1					1
oak, white				7	2				9

<i>Common Name</i>	<i>Excellent</i>	<i>Very Good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Critical</i>	<i>Dead</i>	<i>N/A</i>	<i>TOTAL</i>
pear, Callery			260	132	15				407
pine, Austrian			4	23	10	1	1		39
pine, eastern white			14	12	1				27
pine, Scotch			7	5					12
poplar, white					1				1
redbud, eastern			2	5					7
redcedar, eastern			1	7					8
serviceberry, spp.			5	7	1				13
smoketree, American				2					2
spruce, Colorado			57	66	3		1		127
spruce, Norway		2	18	5	1				26
spruce, white		1	13	3					17
sweetgum, American			2						2
sycamore, American			26	9					35
tuliptree		1	3						4
walnut, black			7	24					31
walnut, English			1						1
willow, corkscrew			1						1
willow, weeping				1	1				2
yellowwood			1						1
Grand Total:		31	1409	1390	229	3	4		3066



Milford, MI
Species/Maintenance Need Frequency Report

<i>Common Name</i>	<i>Tree Clean</i>	<i>Young Tree Train</i>	<i>Removal</i>	<i>Routine Prune</i>	<i>N/A</i>	<i>TOTAL</i>
apple, common				1		1
arborvitae, eastern		3		23		26
ash, green			8			8
ash, white			2	1		3
baldcypress, common		7				7
beech, American		1		1		2
birch, European white	1			2		3
birch, gray		1		2		3
birch, paper	2			3		5
birch, river		31		3		34
blackgum		1				1
boxelder	15	2	17	9		43
buckeye, Ohio	1			1		2
catalpa, northern	2	2	3	1		8
cherry, black	7	2	2	5		16
cherry, sweet				1		1
cherry/plum, spp.	1	8	3	7		19
cottonwood, eastern	16			8		24

<i>Common Name</i>	<i>Tree Clean</i>	<i>Young Tree Train</i>	<i>Removal</i>	<i>Routine Prune</i>	<i>N/A</i>	<i>TOTAL</i>
crabapple, flowering	5	48		31		84
dogwood, flowering		1				1
dogwood, Kousa		1				1
elm, American	11		3	3		17
elm, hybrid		13		3		16
elm, rock		1				1
elm, Siberian	27	5	4	12		48
elm, slippery	1					1
fir, white		5		2		7
ginkgo		10		1		11
hackberry, common		3				3
hawthorn, spp.			1	1		2
hickory, pignut	1			1		2
hickory, shagbark	2			1		3
honeylocust, thornless	21	101	2	160		284
horsechestnut	3	1	2	2		8
juniper, spp.				2		2
katsuratree				1		1
lilac, Japanese tree		9	2			11
linden, littleleaf	10	42	6	65		123

<i>Common Name</i>	<i>Tree Clean</i>	<i>Young Tree Train</i>	<i>Removal</i>	<i>Routine Prune</i>	<i>N/A</i>	<i>TOTAL</i>
locust, black	8		2	6		16
magnolia, saucer		2				2
maple, Amur		2		1		3
maple, Freeman		2		12		14
maple, hedge		1		1		2
maple, Japanese		3				3
maple, Norway	71	46	9	210		336
maple, paperbark		3				3
maple, red	50	152	8	123		333
maple, silver	59		1	66		126
maple, sugar	176	126	29	202		533
mulberry, white	6	2	2	5		15
oak, black	3	2		2		7
oak, bur	8			3		11
oak, northern red	3	19		17		39
oak, pin	3	4	1	10		18
oak, swamp white	1					1
oak, white	8			1		9
pear, Callery	69	215	10	113		407
pine, Austrian	10		5	24		39

<i>Common Name</i>	<i>Tree Clean</i>	<i>Young Tree Train</i>	<i>Removal</i>	<i>Routine Prune</i>	<i>N/A</i>	<i>TOTAL</i>
pine, eastern white	2	3		22		27
pine, Scotch	3			9		12
poplar, white	1					1
redbud, eastern		5		2		7
redcedar, eastern	1	2	2	3		8
serviceberry, spp.		8		5		13
smoketree, American		1		1		2
spruce, Colorado		14	1	112		127
spruce, Norway	3	3		20		26
spruce, white		6		11		17
sweetgum, American		1		1		2
sycamore, American	10	1		24		35
tuliptree		1		3		4
walnut, black	18	4		9		31
walnut, English				1		1
willow, corkscrew		1				1
willow, weeping			1	1		2
yellowwood		1				1
Grand Total	639	928	126	1373		3066



Milford, MI
Tree Valuation Results

<i>Tree Sites Inventoried</i>	3066
<i>Tree Sites Discarded From Evaluation*</i>	0
<i>Tree Sites Evaluated.....</i>	3066
<hr/>	
<i>Base Cost Used.....</i>	\$32.00
<i>Average Value Per Tree.....</i>	\$1,979.08
<i>Total Value</i>	\$6,067,874.55

* Planting Sites and Stumps are excluded from the Tree Valuation Formula